

MESTER, Endre, Dr.; SZTANKAY, Csabo, Dr.

Diabetic gangrene of the upper extremity. Orv. hetil. 99 no.50:
1745-1746 14 Dec 58.

1. A Budapesti Orvostudományi Egyetem I. sz. Sebészeti Klinikájának
(igazgató: Hedri Endre dr. egyet. tanár) közleménye.

(DIABETES MELLITUS, compl.

gangrene of hand & forearm, case report (Hun))

(HAND, gangrene

diabetes mellitus complicated by gangrene of hand
& forearm, case report (Hun))

(FOREARM, gangrene

same)

MESTER, Endre, Dr.

The cystic duct stump syndrome. *Magy. sebeszet* 12 no.2:97-106 Mar 59.

1. A Póvárosi Bajcsy Zsilinszky Sebészeti Osztályának közleménye
Vezető: Mester Endre dr.

(CHOLECYSTECTOMY, compl.

cystic duct stump synd. (Hun))

MESTER, Endre, dr.; HORVATH, Ferenc, dr.; KELEMEN, Endre, dr.

Unusual early complication following surgery of lipoma of the
stomach. Magyar sebészet 13 no.6:375-379 D '59.

1. A Budapesti Orvostudományi Egyetem I. sz. Sebészeti
Klinikájának (Igazgató: Dr. Hedri Endre egyetemi tanár) és
Radiológiai Klinikájának (Igazgató: Dr. Ratkoczy Nándor
egyetemi tanár) közleménye.
(GASTRECTOMY compl)
(LIPOMA surg)

MESTER, E.

Surgical significance of intraoperative cholangiography. Acta
chir Acad Sci Hung 1 no.4:465-480 '60.

1. Department of Surgery, Bajcsy-Zsilinszky Hospital, Budapest
(Chief Surgeon: E. Mester).
(CHOLANGIOGRAPHY)
(BILIARY TRACT surg)

ZSEBOK, Z.; MESTER, E.

Role and importance of the "hard-ray" method in modern x-ray diagnostics.
Acta Chir. Acad. Sci. Hung. 2 no.4:460-471 '61.

(RADIOGRAPHY)

ZHEBEK, Z. [Zeebek, Z.]; MESSTER, E. [Mester, E.]

Role and significance of the "hard rays" in the contemporary roentgen diagnostic investigations. Periodica polytechn electr 5 no.3:274-286 '61.

MESTER, Endre, dr.

The importance of peroperative cholangiography in the diagnosis
and therapy of chronic pancreatitis. *Magy radiol.* 13 no.2:81-85
Mr '61.

1. Bajcsy-Zsilinszky Korhaz sebesseti osztalyanak kozlemenye
(Gaszato-sebess foorvos: Mester Endre, dr.)
(PANCREATITIS radiog)
(CHOLANGIOGRAPHY)
(BILIARY TRACT surg)

MESTER, Endre, dr.

Surgical therapy of stenosis of Vater's papilla. Magyar. sebesset
14 no.1:11-18 F '61.

1. A Bajcsy-Zsilinszky Korhas sebesseti osztalyanak kozlemenye
Igazgato: Mester Endre dr., sebesz foorvos.
(VATER'S AMPULLA dis)

MESTER, Endre, dr.

Clinical significance of residual calculi in the common bile duct.
Magy. sebeszet 14 no.2:70-76 Ap '61.

1. A Bajcsy-Zsilinszky Korház sebeszeti osztályának közleménye
Igazgató-sebesz főorvos: Mester Endre dr.

(CHOLELITHIASIS surg)

MESTER, Endre, dr.

Traumatic stricture of the choledochus. Magy. sebeszet 14 no.4:
209-215 Ag '61.

1. A Bajcsy Zsilinszky Kórház Sebészeti Osztályának (Igazgató főorvos:
Mester Endre dr) közleménye.

(BILE DUCTS wis & inj)

SECRET, Given Names

Country: Hungary

Academic Degrees: Dr.

Affiliation: Director and chief surgeon of the Bajcsy-Zsilinszky Hospital (Bajcsy-Zsilinszky Kórház).

Source: Budapest, Orvoskepzés, Vol 36, No 3, Jun 61, pp 206-230

Data: "Recent Trends in the Surgery of the Biliary Ducts."

GPO 981643

GERGELY, Karoly, dr.; KNEISZL, Ferenc, dr.; MESTER, Endre, dr.

Complications in Coxsackie B virus infection in a premature infant.
Orv. hetil. 102 no.13:611-613 26 Mr '61.

1. Schopf-Merei Agost Korhaz es Bajcsy-Zsilinszky Korhaz.

(COXSACKIE VIRUSES infect) (INFANT PREMATURE dis)

BRUZSA, Bela, dr.; MESTER, Endre, dr.

Congenital abnormalities of the bile ducts. Orv. hetil. 102 no.20:
925-928 14 My '61.

1. Bajcsy-Zsilinszky Korhaz, Sebészeti Osztaly.

(BILE DUCTS abnorm)

MESTER, Endre, dr.; BRUZSA, Bela, dr.

Biliary surgery in old age. Orv. hetil. 102 no.38:1786-1787 17 S '61.

1. Bajcsy-Zsilinszky Korhaz, Sebeszeti Osztaly.

(CHOLECYSTECTOMY in old age)

~~GHEMEZ~~, Rozsa; GERGELY, Karoly, dr.; MESTER, Endre, dr.

A case of paroxysmal tachycardia associated with methemoglobinemia in infants. Gyermekgyógyászat 13 no.1:26-28 Ja '62.

1. Budapest Főváros Tanácsa VB. Schopf-Merei Ágost kórház (igazgató: Gergely Karoly dr) és X. ker. Tanács VB. Bajcsy-Zsilinszky kórház (Igazgató: Mester Endre dr.) közleménye.
(METHEMOGLOBINEMIA in inf & child)
(TACHYCARDIA PAROXYSMAL in inf & child)

MESTER, Endre, dr.

Transdiaphragmatic internal fistulae. Orv. hetil. 103 no.26:1205-1209
1 JI '62.

1. Fovarosí Bajcsy-Isilinszky Korház, Sebezeti Osztály.
(DIAPHRAGM dis) (FISTULA)

MESTER, Endre, dr.

Current problems of surgery for colic lithiasis. Orv. hetil. 106
no. 28:1297-1305 11 J1'65.

1. Budapesti Orvostudományi Egyetem, II. Sebészeti Klinika
(igazgató: Mester, Endre, dr.).

MESTER, I.

111. Construction of moving forms. — *Országos építészeti és építőipari kiállítás, Budapest, 1953. No. 7, pp. 201-210, 25 figs.*

The design of moving forms, the organization and phases of work are described. For the economical application of moving forms walls must be at least 15 m high. The advantages: concreting can be done in one fourth of the time required with fixed shutters, scaffolding — necessary for fixed shutters — can be eliminated, walls can be concreted without construction joints and as a consequence are more watertight, wall surfaces are smooth on both sides and finally this method of construction ensures greater safety. The disadvantages: the high cost of jacking equipment, the necessity of very careful coordination between the different phases of work, and the organic correlation of the various phases of construction which holds up the entire work in the event of unavoidable disturbances. The equipment (forms, threaded shafts, jacking devices, scaffolds), organization of work (adequate stocks and supplies, elevators and stairs, number and arrangement of mixers, labour) as well as the construction of work itself (reinforcement, concreting, operation of jacks and concreting of ceilings) are discussed. An hourly rate of 40-50 cm can be attained with moving forms. It is advisable that hydraulic jacks be used as practiced in the Soviet Union instead of screw jacks. In case of breakdowns a spare hoist, preferably diesel powered, should be available. Several small mixers should be employed instead of a central large batching and mixing plant.

NESTER, J.

A competition for making a better product than the one made by the
other party. . . . The first of these is the "Economic" type, which is
the most common. It is based on the principle that the best product is
the one that costs least to make. This is the basis of all competitive
pricing.

Monthly List of Deaths - 1941, continued (PART) LG, Vol. 1, No. 7, 1941, p. 1.

• FICL

VARGHA, E.; MESTER, I.

Contributions to the study of structure and reaction of the
cyclohexylide-cyanacetic ester. Studia Univ B-B S. Chem 7
no.1:127-134 '62.

Master 12-37

4448* Nondestructive Metallographic Examination. Nemesol-
kesmentes metallográfiai vizsgálata. (Hungarian.) István Mester
and Erik Fuchs. *Onlode*, v. 8, no. 10, Oct. 1954, pp. 211-221.
Description of apparatus for electrolytic polishing, etching,
and examination of microstructures of surfaces of finished or
semi-finished parts. Diagrams, micrographs, photographs. 15
ref.

my 8/11/54

MESTER, I.

MESTER, I. Viewpoints in correctly selecting steels. p. 76.

Vol. 8, No. 2, Feb. 1956.

GEP

TECHNOLOGY

Budapest, Hungary

So: East European Accession, V. 1. 6, No. 2, Feb. 1957

H/014/60/000/002/002/003
E190/E435

AUTHOR: Mester, István

TITLE: Non-Destructive Metallographic Examination of
Materials

PERIODICAL: Kohászati lapok, 1960, No. 2, pp. 73-77

TEXT: The paper is one of a series published on the 10th Anniversary of the Vasipari Kutató Intézet (Research Institute for the Iron Industry). The structure of materials, as revealed by the metal-microscope, gives a wealth of information on the state of the material. In order to illustrate this point, photomicrographs of materials with a widely different structure yet identical hardness are shown. Micrographic examination, however, has the disadvantage that the preparation of specimens is expensive and often leads to the destruction of the piece to be investigated. This resulted in attempts to draw conclusions on structure from results of other non-destructive tests, such as ultrasonic, inductive and magnetic tests. In the author's view, these efforts are often misdirected and the results unreliable. In most cases, a perfectly satisfactory and economical observation of structure can be made
Card 1/2

Non-Destructive Metallographic ...

H/014/60/000/002/002/003

E190/E435

on the surface of the workpiece after local polishing and etching. even if the area is not as free from scratches as would be expected in a conventional preparation of specimens. The depth of preparation is only a few hundredth mm and can usually be tolerated on most workpieces. A compact patented equipment, developed specially for this purpose is described in another paper by E. Fuchs, metallurgical engineer. It has been in use for several years and gave millions of Forints saving by facilitating quality checking. There are 12 figures.

Card 2/2

MISTER, Latvian

Contest for multi-purpose farm building frames with prestressed elements. Magy ep ipar 12 no.10:447-452 '63.

MESTER, Istvan; FUCHS, Erik

Nondestructive metallographic tests. Koh lap 9 no. 10:
Supplement: Ontode 5 no. 10: 217-227 O '54.

1. Vasipari Kutato Intezet.

SZUCS, Endre; KOVACS, Sandor; MESTER, Istvan; JUNG, Bela; LELKES, Gabor;
SCHUSSLER; HAJTO, Nandor, dr.; VERO, Jozsef, dr.

Remarks about Nandor Hajto's lecture entitled "Mn-Ti
containing casehardened steels." Koh lap 9 no. 3: 102-108
Mr '54.

1. Darutervezo Iroda (for Schussler).

MESTER, I.M.

~~CONFIDENTIAL~~
Protection of mine induction meters from single phase operation.
Ugol' 31 no.1:28 Ja '56. (MIRA 9:4)

1. Karagandagiprosnakht.
(Electricity in mining) (Electric meters, Induction)

MESTER, I. M.

821.313.13
✓ 4844. DETERMINATION OF VOLTAGE DROP ON
ASYNCHRONOUS STARTING OF HIGH-VOLTAGE MOTORS FROM
AN INFINITE POWER SOURCE. I. M. Mester
Elektrichstvo, 1957, No. 3, 16-18. In Russian.

The widely used formula for determining the voltage drop on
the starting of high-voltage motors is wrong in principle and leads
to inadmissible errors in rating. To avoid complications and keep
expenditure down, ratios are suggested in the article which are
both simpler and more accurate.

Central Electricity Authority Digest

2

137
MT

AUTHOR: Mester, I. M., Engineer (Karaganda) 105-58-6-23/33

TITLE: Concerning the Problem of the Initial Resistive Torque in Large Mine Fans (K voprosu o nachal'nom momente soprotivleniya moshchnykh rudnichnykh ventilystorov)

PERIODICAL: Elektrichestvo, 1958, Nr 6, pp. 84-84 (USSR)

ABSTRACT: It is pointed out that in reality two values of the static resistive torque must be taken into account, the initial resistive torque of starting and the initial resistive torque of motion T_0 . The former is determined by the state of the bearings and the friction in the state of rest and amounts to from 0,15 to 0,20 of $M_{nominal}$. After the starting the initial resistive torque considerably decreases. From the point of view of the electric drive of mine ventilators the value T_0 is most interesting. The value of $T_{starting}$ as a rule is lower than the starting torque of the motor. The full duration of the free starting of a ventilator aggregate (of $n_{nominal}$ (nominal velocity of the aggregate in revs/min) to 0) can be determined according to formula (1). As this is a transcendental function

Card 1/2

Concerning the Problem of the Initial Resistive Torque
in Large Mine Fans

105-58-6-23/33

of α , the solution is obtained graphically, The experiments were made in the ventilating system of the main ventilation in the pit no.3 bis and the ventilating system of the pit no.120 of the "Karagandaugol' " Kombinat. In both cases the sliders were open and the axial fans supplied the ventilation network of the pit. The experiments showed that in both systems the α -value did not exceed 0,01 to 0,015. Therefore this value can be disregarded in the computations. There are 1 figure and 2 references, which are Soviet.

SUBMITTED: September, 25, 1957

1. Blowers--Properties 2. Torque--Measurement 3. Electric
motors--Performance 4. Mathematics 5. Mines--Equipment

Card 2/2

MESTER, I.M., inzh.; TIKHONOV, V.Ya., inzh.

Choice of parameters for a speed governor for mine hoists with asynchronous drive. *Isv. vys. ucheb. zav.; ser. zhur. no.12: 112-114 '61.* (MIRA 16:7)

1. Karagandinskiy politekhnicheskiy institut. Rekomendovana kafedroy obshchey i gornoy elektrotekhniki.
(Mine hoisting—Electronic equipment)
(Automatic control)

MESTER, I.M.

Mining area used as an object for regulating concentrations of methane. Nauch. trudy KNIUI no. 11:155-162 '64.

Basic criteria for selecting systems of telemetering the parameters of mine air. Ibid.:277-283

Analysis of various telemetering systems and basis for the technical conditions for telemetering apparatus for the parameters of mine air. Ibid.:283-292

Theoretical investigation of a parametric pulse-width telemetering device. Ibid.:292-299 (MIRA 17:7)

MESTER, I.M.; SAKSONOV, V.N.; GUMEL', A.Ya.; SOKOLENKO, Yu.V.

Structural parameters and results of the industrial testing
of telemetering apparatus for measuring methane concentrations
in mine air. Nauch. trudy KNIUI no. 11:299-313 '62.
(MIRA 17:7)

MESTER, Izrail' Moysseyevich

[Electric drive and automatic control of mine fans for
the main ventilation of mines] Elektroprivod i avtomatika
rudnichnykh ventilatornykh ustanovok glavnogo provetri-
vaniia. Moskva, Nedra, 1964. 165 p. (MIRA 187)

ARAKELOV, V.N., inzh.; MESTER, I.M., inzh.

Study of pulse-duration telemetering converters. Izv. vuz. radiofiz.;
gor.zhur. 7 no.12:114-121 '64. (MIRA 18:2)

1. Karagandinskiy nauchno-issledovatel'skiy ugol'nyy institut.
Rekomendovana kafedroy avtomatizatsii proizvodstvennykh protsessov.

MESTER, I.M.

dynamic electrical model of a mine bed. Inst. of
no.16:271-278 '64. (S-1) (S-1)

ARAKEL, V.M.; DONIS, V.K.; MEESTER, I.M.

Industrial testing of equipment for telemetering the parameters
of a mine atmosphere during the joint operation with the DTK-1
dispatcher remote control equipment. Nauch. trudy KNITU
no.15:356-362 '64. (MIRA 18:8)

MESTER, I.M.

Effect of boron fertilizers on the yield and quality of
grapes. Dokl. AN Uz.SSR 21 no. 10:57-59 '64 (MIRA 19:1)

1. Samarkandskiy sel'skokhozyaystvennyy institut imeni
Kuybysheva. Submitted May 24, 1963.

MESTER, Laszlo

How should a coach follow the progress of his students with
interest? Repules 14 no.7:3-4 J1 '61.

MESTER, Laszlo

The door is wide open. Repules 14 no.9:9 S '61.

MESSIAH, ANDRAS

Chemical Abst.
Vol. 48 No. 4
Feb. 25, 1954
Organic Chemistry

Structure of formazans of the sugar group. Géza Zemplén, László Mester, Andráš Meszner, and Ede Eckhart (Tech. Univ., Budapest). *Acta Chim. Acad. Sci. Hung.* 2, 25-32 (1953) (in German).—The reaction of sugar phenylhydrazones with a neutralized soln. of diazotized PhNH₂ (I) was investigated to det. the actual mode of formation of sugar formazans. The linkage of I can not take place at the HO group of the sugar mol., nor at the imide group of the phenylhydrazone. The latter possibility exists theoretically but the intermediate product rearranges to formazan. The p-position of the phenylhydrazone offers no chances for the linkage under these conditions, thus only the azomethine C atom of the sugar phenylhydrazone remains as a possible location for the linkage. Galactose in 96% EtOH and pyridine, with crystd. NaOAc and I gave no ppt. when dild. with water. Similar treatment of galactose methylphenylhydrazone and arabinose diphenylhydrazone yielded the unchanged initial compd., since there is a substituted imino H and according to the Busch theory (B. and Pfeiffer, C.A. 20, 2962; B. and Schmidt, C.A. 23, 5152) phenylhydrazones contg. substituted NH groups give no formazans. Conversely, the treatment of galactose p-bromophenylhydrazone with I yielded the corresponding galactose formazan, corroborating that p-substitution does not inhibit this reaction: the brownish red galactose p-bromofornazan, m. 101-2°, was obtained in 2.8 g. yield by treating 2.3 g. galactose p-bromophenylhydrazone and 2.3 g. crystd. NaOAc in 8 ml. EtOH and 13 ml. pyridine at -5° with a soln. of 0.7 I at -5°, allowing to stand 24 hrs., filtering, drying in a vacuum desiccator, and recrystg. from hot BuOH. As a decisive confirmation of the formazan structure, the same compd. m. 101.5-2.0°, was prepd. also by adding 0.85 g. isopentyl nitrite drop by drop to 3.4 g. BrC₆H₄NH₂ in a 14 ml. abs.

(over)

LESSER, ANDREAS

Preparation of thioaldonic acid phenylhydrazide by the action of hydrogen sulfide upon sugar-formazyls. *Chem. Zvesten*, 1947, 86, 697-698 (1943) in German. *Chem. Zvesten*, 1947, 86, 697-698 (1943) in German. *Chem. Zvesten*, 1947, 86, 697-698 (1943) in German. The reduction of R = D-glucose-pentahydroxypentyl. The reduction of sugar-formazyl with H₂S yields the phenylhydrazide of thioaldonic acids. The constitution of these deriva. is proved by the prepn. of new thiazoline deriva. of the sugar series. Thus a soln. of 1 g. R'C(:NNHPh)N:NPh in 100 ml. 90% EtOH satd. with H₂S, kept 48 hrs. at room temp., filtered from the S and concd. in vacuo gave 0.37 g. R'C(:S)NNHPh. Ph (l), m. 174°; [α]_D²⁰ 31.6° (C₁₀H₁₁N). 1 (1 g.) in 50 ml. H₂O and heated 1 hr. until no more H₂S was evolved, and the hot soln. decolor. at with C and concd. in vacuo gave 0.3 g. R'C(:S)NNHPh. m. 174°; [α]_D²⁰ 31.6° (H₂O). 1 (0.6 g.) and 0.24 g. H₂ in 0.5 ml. abs. EtOH treated with 0.25% HCl and the mixt. warmed on a H₂O bath 1 min. yielded 0.5 g. R'C(:S)NNHPh. m. 173-174°; [α]_D²⁰ 32.0° (90% EtOH). R'C(:S)NNHPh. m. 173-174°; [α]_D²⁰ 32.0° (90% EtOH). R'C(:S)NNHPh. m. 173-174°; [α]_D²⁰ 32.0° (90% EtOH). 1 (0.6 g.) and 0.24 g. H₂ in 0.5 ml. abs. EtOH treated with 0.25% HCl and the mixt. warmed on a H₂O bath 1 min. yielded 0.5 g. R'C(:S)NNHPh. m. 173-174°; [α]_D²⁰ 32.0° (90% EtOH). J. S. Martin, Jr.

MESSMER, A.

6000

1. Messmer, A. *Chem. Ber.* 1953, 86, 453-459.

The reaction of the nitro group and of the nitro
group in the presence of pyridine in pyridine
solutions are unimolecular. The reaction
occurs readily even in pyridine solution in the case
of *para*-nitro derivatives since chelation is impossible.
The *meta* and *para*-substituted triphenylformazans are
readily oxidized to yield the corresponding tetrazolium
derivatives. In contrast to this the reaction is extremely
slow in the case of the *ortho* isomers which may be
due to the steric hindrance of the nitro group.

G

Country : HUNGARY
 Category : Organic Chemistry. Synthetic Organic Chemistry

Os. Jour : Ref Zhur - Kaim., No 5, 1959, No. 15323

Author : Messmer, A.; Varady, J.; Pinter, I.
 Institut. : Hungarian AS
 Title : Halogenation and Cyclizing Dehydrogenation
 with Tribromophenol-Bromine

Orig. Pub. : Magyar tud. akad. Kom. tud. oszt. kozl., 1957,
 9, No 3, 329-334

Abstract : In search of new halogenation agents, the au-
 thors dwelled on tribromophenol-bromine (I)
 which, possessing a quinoid structure that
 changes during the output of Br into a benzoid
 one, can be preferred to N-bromosuccinimide
 (II) in those cases where the reaction is elec-
 trophilic. For comparison, bromination of cyc-
 lohene (III) was conducted to an allyl state
 (at 83°), and that of acetanilide (IV) to an
 aromatic nucleus (CCl₄, at 77°). During halo-

Car: 1/3

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Country :
 Category :
 Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15323
 Author :
 Institut. :
 Title :
 Orig. Pub. :
 Abstract cont'd. : generation of III by the action of II (20 minutes), 1-bromocyclohexene-2 (V) was obtained with 87% yield, while I gives V with a yield of 42%. During halogenation of IV, similar yields are obtained in the case of II within 160 minutes, and in the case of I within 35 minutes. For comparison of I with II during cyclizing dehydrogenation (CD) from α -benzene-azo-N-phenyl- β -naphthylamine, 1,2-diphenyl-naphthotriazole (VI) is obtained, and from

Card: 2/3

18. The structure of pseudoaromatic chelates. ⁷ A. Messner, O. Sziman. ^{23 MAY} 8 figs. 1 tab.
Magyar Kemiai Folyoirat, Vol 64, 1958, No. 7-8, pp 290-292, 8 figs. 1 tab.
Studies of the reaction mechanism of the splitting of the hydrogen-bridge
led to the conclusion that there is a σ resonance in the N-H... N bridges of
pseudoaromatic chelates (six-membered chelate systems with two double bonds).
This statement is in agreement with the u. v. spectroscopical properties of
model compounds substituted on various sides of the bridge, but it is different
from chelates studied by Burawoy which were supposed to contain O-H... N bridges
of pure electrostatic structure. Thus pseudoaromatic chelates containing
O-H... N and N-H... N bridges are fundamentally different in respect to the
structure of the hydrogen bridge.

(Retyped clipped abstract)

jt

Card 1/1

MULLER, Sador, dr., prof.; (Budapest, VIII., ~~Museum~~ korut 4/b)
MESSMER, Andras, dr. (Budapest, II., Pusztaszeri ut 57/69)

Contribution to the symbols of organic chemical structural
forms. Acta chimica Hung 38 no.1:35-45 '63.

1. Institut fur Organische Chemie der L. Eotvos-Universitat,
Budapest, und Zentralforschungsinstitut fur Chemie der
Ungarischen Akademie der Wissenschaften, Budapest.

L 46854-06 EMP(J) RM
ACC NR: A: 6034717

SOURCE CODE: HU/0005/65/071/009/0388/0392

AUTHOR: Diczo, Giza, Ladik, Janos, Messmer, Andras; Hungarian Academy of Sciences, Central Research Institute of Chemistry (Magyar Tudomanyos Akademia, Kozponti Kemiai Kutato Intezet), Budapest.

TITLE: Study of the electronic structure of 1-benzene-azo-n-phenyl-2-naphthyl-amino chelate II. Approximate calculation of the potential function of the n-h...n hydrogen bond

SOURCE: Magyar kemiai folyoirat, v. 71, no. 9, 1965, 388-392

TOPIC TAGS: hydrogen bonding, organic azo compound, chelate compound

ABSTRACT: The potential functions of the N-H...N hydrogen bond of 1-benzene-azo-N-phenyl-2-naphthylamine and of the O-H...N hydrogen bond of 1-benzene-azo-2-naphthol have been calculated by using the semiempirical method of Hippincott and Schroeder. The calculations were carried out for different N-N and O-N distances. According to the results, in the chelate system containing the N-H...N hydrogen bond, the potential function has only one single minimum if the N-N distance is smaller than 2.76 Å. Since such a large N-N distance seems to be improbable, this result is in agreement with the previous experimental results which indicate that this system is homogeneous. The results obtained for the second system indicate that a potential with double minima can be expected only if the O-H distance is greater than 2.78 Å.

Card 1/2

0921 1345

L 46854-66
ACC NR: AP6034717

The authors thank Jeszanak Adrienne for carrying out the calculations. Orig.
art. has: 4 figures, 10 formulas and 2 tables. [JPRS] [Based on authors' Eng. abst.]

SUB CODE: 07 / SUBM DATE: 21 Jan 65 / ORIG REF: 002 / OTH REF: 005

Card 2/2

MESSMER, Andras

On the mechanism of diazotation and azo-coupling. Magy kem lap
18 no.8:384-394 Ag '63.

1. Magyar Tudomanyos Akademia Kozponti Kemiai Kutato Intezete.

L 34716-66 EWP(J) RM

SOURCE CODE: HU/2502/65/046/003/0195/0203

ACC NR: AT6025195

AUTHOR: Biczo, Geza—Bitso, G. (Doctor); Ladik, Janos—Ladik, Y. (Doctor); Messner, Andras (Doctor)

ORG: Central Research Institute for Chemistry, Hungarian Academy of Sciences, Budapest

TITLE: Investigation of the electronic structure of 1-benzene-azo-N-phenyl-2-naphthylamine chelate. Part 2

SOURCE: Academia scientiarum hungaricae. Acta chemica, v. 46, no. 3, 1965, 195-203

TOPIC TAGS: chelate compound, organic azo compound, chemical bonding

ABSTRACT: Part 1 was published Ibid., v. 38, 1963, p. 393. The potential function of the N-H...N hydrogen bond in the title compound and of the O-H...N hydrogen bond in 1-benzene-azo-2-naphthol was determined for various N-N and N-O distances. The chelate system was found to be homogeneous. The values obtained were presented and discussed. The authors thank Miss A. Jeggnek for performing the numerical calculations. Orig. art. has: 4 figures, 10 formulas, and 2 tables. /Orig. art. in Eng/

JPRS: 34,1657

SUB CODE: 07 / SUM DATE: 04Feb65 / ORIG REF: 002 / OTH REF: 005

Card 1/1

0916 0560

MFSTAK, Bohuslav, dr.

For profitable management of enterprises. P. dn org 19 no.2:
63-66 F '65.

1. Technical and Economic Research Institute of Metallurgical
Industry and Ore Mines.

MESTAN, J.

2/6284

PHASE I BOOK EXPLOITATION

Jerie, Jan, ed., Engineer, Doctor, Corresponding Member of the Czechoslovak Academy of Sciences

Základní problémy ve stavbě spalovacích turbin (Basic Problems in the Construction of Gas Turbines [collection of articles]). Prague, Nakl. ČAV, 1962. 627 p. 1600 copies printed.

Sponsoring Agency: Československá akademie věd.

Ed. of Publishing House: Marie Moravcová; Tech. Ed.: František Končícký.

PURPOSE: The book is intended to familiarize turbine designers with recent developments in the design of gas turbines and to present some research results which may be helpful in designing more efficient turbines.

COVERAGE: The book comprises articles by leading Czechoslovak turbine experts on thermodynamic cycles, flow research in turbine components,

burning of fuel in combustion chambers, axial compressors, and characteristics of turbines manufactured in Czechoslovakia.

Basic Problems in the Construction (Cont.)

V. Svoboda, J. Šinták, J. Peirfeil, and J. Měšťan (Prague Electrical Engineering Plant, Prague). Axial Compressors Manufactured by the Českomoravská Kolben Daněk Electrical Equipment Plant

z/6284

9/10

○ 457

V. Polta and M. Vlasák (State Research Institute for Heat Engineering, Prague). Theoretical and Experimental Results of Studies on the Properties of Axial Compressors

485

M. Vlasák. Axial Compressors for High Pressure Ratios

499

R. Dvořák (Institute for Machine Research, Czechoslovak Academy of Sciences, Prague) and K. Čelíkoveš (Aviation Research and Testing Institute, Lethany). Flow in the Transonic and Supersonic Stage of an Axial Compressor

513

O. Buřata ("Jan Šverma" Plant, Jinonice). Inlet Air in a Radial Compressor at Transonic Flow Velocities

529

Card 7/8 2/2-

MESTAN, J

[illegible]

q. r1:

1/2

REINIS, Z.; POKORNY, J.; HRABAN, J.; MESTAN, J.

Relation of serum lipoproteins to organic complications in atherosclerosis. Sborn. lek. ol no.11-12:331-338 Nov 59.

1. IV. interni klinika fakulty vseobecneho lekarstvi University Karlovy v Praze, prednosta prof. dr. M. Fucik.
(ARTHERIOSCLEROSIS, blood) (LIPOPROTEINS, blood)

ZOULEK, D.; SOUKUPOVA, K.; MESTAN, J.; HRABANE, J.; REINIS, Z.

Epidemiological studies on health conditions in rural population of a mountain village with regard to atherosclerosis. Sborn. lek. 61 no.11-12:339-344 Nov 59.

1. Iv. interni klinika fakulty vseobecneho lekarstvi University Karlovy v Praze, prednosta prof. dr. M. Fucik.
(ARTHERIOSCLEROSIS, statist.) (RURAL HEALTH)

REIMIS, Z.; ZOULEK, D.; MESTAN, J.; SOUKUPOVA, K.; KRABANE, J. KONRAD, J.

Epidemiology of atherosclerosis. Cas.lek.cesk. 99 no.7/8:231-241
19 F '60.

1. Kardiovaskularni laborator IV. interni kliniky KU v Praze, pred-
nosta prof.dr. M. Fusik. Interni oddeleni GUNZ v Turnove, prednosta
MUDr. J. Konrad.

(ARTERIOSCLEROSIS epidemiol.)

POKORNY, J.; REINIS, Zd.; MESTAN, J.; PARTLOVA, O.

Ischemic disease of the heart in patients with thromboangitis
obliterans. Acta univ. carol. [med.] Suppl. 14:463-468 '61.

1. IV. interni klinika fakulty vseobecneho lekarstvi University
Karlovy v Praze, prednosta prof. dr. M. Fucik.
(THROMBOANGIITIS OBLITERANS compl) (CORONARY DISEASE etiol)

ZOULEK, D.; REINIS, Z.; KONRAD, J.; MESTAN, J.; HRABANE, J.

Role of ischemic disease of the heart in the epidemiology of atherosclerosis. Acta univ. carol. [med.] Suppl. 14:469-476 '61.

1. IV. interni klinika fakulty vseobecneho lekarstvi University Karlovy v Praze, prednosta prof. dr. M. Fucik Fakultni nemocnice v Praze — Vinohrady Interni oddeleni nemocnice v Turnove Ustredni laboratore fakultni nemocnice v Praze 2. prednosta dr. J. Hrabane.
(CORONARY DISEASE epidemiol)

SULC, M.; WESTAN, J.; MICHALEC, C.

Lipids in certain pathological conditions. I. The iodine number in clinical atherosclerosis. Sborn.lek.63 no.2:33-39 F '61.

1. Laborator angiologicka fakulty vseobecneho lekarstvi University Karlovy v Praze, reditel prof.dr. B.Prusik; Laborator pro metabolismus bilkovin a proteosyntezu fakulty vseobecneho lekarstvi University Karlovy v Praze, reditel prof. dr. J.Horejsi.
(ARTERIOSCLEROSIS blood)
(FATS blood)
(IODINE)

MICHALEC, U.; SULC, M.; MESTAN, J.; HALAMA, D.; KOMAN, V.

Lipids in certain pathological conditions. II. Studies on fractions
on cholesterol esters in human and animal blood. Sborn. lek. 63
no.4:99-103 1961.

1. Laborator pro metabolismus bikovin a proteosyntezu fakulty
vseobecneho lekarstvi University Karlovy v Praze, reditel prof.
dr. J.Horejsi, Laborator angiologicka fakulty vseobecneho lekarstvi
University Karlovy v Praze, reditel prof. dr. B.Prusik, Slovenska
vysoka skola technicka, katedra biochemie a mikrobiologie v Bratislave,
reditel prof. dr J.Nemec.

(CHOLESTEROL blood)

PRUSIK, B.; REINIS, Z.; MESTAN, J.

Progressive development of thromboangiitis obliterans. (A report on 450 patients with Buerger's disease). Cas.lek.cesk 100 no.4:97-101 27 Ja '61.

1. Kardiovaskulární laborator Fakulty všeobecného lékařství v Praze, přednosta prof. dr. B. Prusík, IV. interní klinika, přednosta prof. dr. M. Fucík, Praha.

(THROMBOANGIITIS OBLITERANS statist)

SULC, Miloslav; MICHALEC, Cestmir; MESTAN, Jan; KOLMAN, Zdenek

Experience with the isolation of unsaturated glycerides and their characteristics in the human serum. Cas.lek.cesk 100 no.22:696-698 2 Je '61.

1. Angiologicka laborator fakulty vseobecneho lekarstvi KU v Praze, reditel prof. dr. B. Prusik. Laborator pro metabolismus bilkovin a proteosyntezu fakulty vseobecneho lekarstvi KU v Praze, reditel prof. dr. J. Horejsi.

(FATS, UNSATURATED blood)

MICHALEC, C.; SULC, M.; MESTAN, J.; KOLMAN, Z.; JICHOVA, M.

Comparative chromatographic studies on the content of unsaturated triglycerides in various oils and fats. Cas.lek.cesk 100 no.29/30: 909-912 14 J1 '61.

1. Laborator pro proteosyntezu a metabolismus bilkovin fakulty vseobecneho lekarstvi KU v Prase, reditel prof. dr. J. Horejsi, Laborator angiologicka fakulty vseobecneho lekarstvi KU v Prase, reditel prof. dr. B. Prusik.

(LIPIDS chem)

MESTAN, J.

PHASE I BOOK EXPLOITATION

JUN 25 1962 42

Jerie, Jan, ed., Engineer, Doctor, Corresponding Member of the Czechoslovak Academy of Sciences

Základní problémy ve stavbě spalovacích turbin (Basic Problems in the Construction of Gas Turbines (collection of articles)). Prague, Nakl. ČAV, 1962. 627 p. 1600 copies printed.

Sponsoring Agency: Československá akademie věd.

Ed. of Publishing House: Marie Moravcová; Tech. Ed.: František Konáček.

PURPOSE: The book is intended to familiarize turbine designers with recent developments in the design of gas turbines and to present some research results which may be helpful in designing more efficient turbines.

COVERAGE: The book comprises articles by leading Czechoslovak turbine experts on thermodynamic cycles, flow research in turbine components.

Card 1/8

CX

PROCESSES AND PROPERTIES
The methods of working up Hungarian wool. [Aust.
Mester. Kémikusok Lapja 2, No. 7, 13-14(1941).—A
S. S. de Pindy
General description.

ASB-BLA METALLURGICAL LITERATURE CLASSIFICATION

031187 CHE QW 151

031187 CHE QW 151

10

CR

Decomposition of glycosides by treatment with conc. *László Mente* (Univ. Tech. Sci., Budapest). *Magyar Chem. Folyóirat* 90, 125-35 (1944).—Expts. published in detail (cf. Zemplén, et al., C.A. 39, 3410, 3432) proved that glycosides can be easily decomposed by treatment 8-18 hrs. in 95% AcOH soln. with a current of gas contg. 3-6% (h). This method may be used for the sepn. of the sugar group of rutinoides in the form of cryst. rutinos acetate, thus making the detn. of the structures possible. In glycosides contg. disaccharides or bioses or their acetates, when no cryst. products can be obtained, the method still gave valuable information on the structure and properties of these disaccharides without decoupling. The glycoside of neoflavin contg. rhamnose and glucose was isolated in the form of rutinos acetate, and then its structure was detd. From acacuin was sepd. a bios which consisted of rhamnose and glucose instead of a disaccharide previously believed to be present. From quercitrin the rhamnose part was sepd. in cryst. form. It was proved that robinin does not contain a trisaccharide but a mono- and a disaccharide. The sugar component of hesperidin was isolated, and a noncryst. substance, neohesperidase, was sepd. from neohesperidin. No cryst. bioses could be obtained from saphorabioside.

Lotván Földy

CA

7

Detection and determination of tetrasine.—Laudy
Meares, *Analyst Chem. Polytech* 81/33, 32-4 (1945 4)
(Pub. 1944).—Treat 0.1 g. of tetrasine with 2-3 g. of
borax and alloy and 20 ml. of 33% NaOH. Steam distill
the resulting NH₃ through a condenser into a receiver
contg. 20 ml. of 0.1 N H₂SO₄ colored with a drop of methyl
red indicator soln. After the NH₃ has been expelled
titrate the excess acid in the receiver with 0.1 N NaOH.

Isuzu Finally

ABSTRACT METALLURGICAL LITERATURE CLASSIFICATION

5

C.A

Photosensitivity of stabilized diazo films. László Mester
(Univ. Tech. Sci., Budapest, Hung.). *Magyar Kém. Lapja*

, 3, 20-2/1950). -Photosensitivity of diazo films used in
diazotype printing operations is influenced by 3 factors
pH, structure of diazo compds., and sensitizing agents.
Photosensitivity is generally higher in acid media (at pH
values below 7) than in alk. media. In the group of diazo
anhydrides the ortho and meta compds. generally show high
stability and photosensitivity. Another group of suitable
diazo compds. contains amino groups substituted in the para
position. Presence of substituents in the 2 and (or) 5
positions significantly increases the photosensitivity of such
compds. Anthraquinone, *p*-diazonitrophenylamine, aromatic
ketones, coumarins, quinoxaline, etc., proved to be effective
sensitizers of diazo films. I. Pindly

CA

The structure of acacin Géza Zemplén and László Mester (Univ. Tech. Sci., Budapest). Magyar Kém. Folyóirat 56, 27 (1954). - Raw acacin (I) was obtained in 16-g yield by boiling 1 kg dry leaves of *Robinia pseudoacacia* with 10 l water 1 hr, filtering, pressing the juice from the moist leaves, treating the combined juices with 100 ml basic Ph acetate soln, filtering, leaching the ppt. twice with 1 l hot water, keeping the combined filtrates overnight in a refrigerator, filtering, and drying by boiling 20 g of the dried acacin (II) was obtained in 1-g yield by boiling 20 g of I with 200 ml 85% EtOH 30 min, filtering, dilg to 400 ml with water, shaking, treating overnight, sepg. the liquid with 100-50 ml CHCl₃, keeping overnight, and drying the CHCl₃ phase. Filtering by suction, and drying the ppt. Partially-cryst. acacin (III) was obtained in 1.3-g yield by refluxing 10 g II with 100 ml glacial AcOH until II is fully dissolved, cooling, filtering by suction, adding 100 ml hot EtOH, cooling, filtering the combined juices, filtering by suction, like ppt., boiling 24 hrs in a refrigerator, and drying. Cryst. acacin (IV), m 231° (decolor), -85.3° (in C₆H₅N), -99.5° (glacial AcOH), fine colorless needles, was obtained in 0.4-g yield by treating 0.5 g III in 1.5 ml hot C₆H₅N with 3 ml hot water, cooling, filtering, and crystg from C₆H₅N and water.

Hydrolysis of IV gave 45.34% dextrose, m 231°. The rhamnose content of IV was 26.0%, confirming that IV contains 1 mol rhamnose and 1 mol glucose. Acacin glucosazone (V), m 203° (0.03 g), and acacin rhamnosazone (VI), m 186° (0.03 g), were obtained by refluxing 0.502 g IV with 20 ml 5% HCl 4.5 hrs, allowing to stand overnight, removing the resulting aglucon by filtering, adding 3.5 g cryst. NaOAc to the filtrate, heating to 100° on the water bath with 1 l 5% PhNH₂HCl, allowing to stand overnight, filtering, shaking the ppt. with acetone, and filtering. The yellowish insol. substance obtained on shaking with acetone is V, whereas heating the acetone phase after adding hot water, cooling, and filtering gave VI. 5-Methylacacin (VII), m 279-281°, was obtained in 0.05-g yield by shaking 0.2 g IV, 2 ml MeOH, 2 ml Me₂SO, and 8 ml 10% KOH 3 days, adding during this treatment three 2-ml portions of 10% KOH, neutralizing with concd HCl, adding 2.5 ml concd HCl, refluxing 3 hrs, cooling, allowing to stand 1 day, filtering, drying, and crystg from abs EtOH and hot water. Petacacin (VIII), amorphous m about 235°, was obtained in 3.5-g yield by cooling the glacial AcOH soln of 10 g II, filtering by suction, treating the C₆H₅N soln of the ppt. with active C, filtering, adding

60 ml. hot water, allowing to stand overnight, filtering by suction, and drying at 110°. The *aglucon*, m. 281°, of VIII was obtained in 40% yield by refluxing VIII with 5% HCl 1.5 hrs., filtering, and drying the ppt. The *glucosazone* (IX) (0.03 g.), m. 204°, and the *rhamnosazone* (X) (0.05 g.), m. 181°, of VIII were obtained by treating 0.5 g. VIII as described for V and VI. *5-Methylacacetin*, m. 286°, was obtained in 0.07-g. yield by mixing a suspension of 0.2 g. VIII in 2 ml. MeOH, 2 ml. Me₂SO, and 8 ml. 10% KOH, and treating further as for VII. Ozonization and oxidation with hypodiodite showed that both IV and VIII are acacetin 7-rhamnosidoglucosides, the VIII probably being an amorphous modification of IV. Although the m.p. and rotation of IV are similar to those of linarin, they are not identical compds. From a structural point of view IV is a rhamnosidoglucoside whereas linarin is an acacetin 7-rutinoside.

Istvan Fenyv

Mester, L.

Hungarian Technical Abst.
Vol. 5 No. 2
1953

517-459-7

11 The structure of sugar formazans *Cukor-formazánok szerkezete* G. Zemplén and L. Mester.
(Proceedings of the Chemical Science Department of the
Hungarian Academy of Sciences - *A Magyar Tudományos
Akadémia Kémiai Osztályának Közleményei* - Vol. 1,
No. 3-4, 1952, pp. 73-78)

Some new sugar derivatives with a nitrogen content have been prepared recently. Sugar phenylhydrazones have been brought into reaction with a neutral solution of diazo-aniline in an alcohol pyridine solution for this purpose. The resultant compounds were classified as sugar formazans and their structure proven by producing e. g. monobromine derivatives of galactose formazan. Galactose-para-bromo-phenyl-hydrazine has been brought into reaction with diazo-aniline on the one hand and diazo-para-bromo-aniline was coupled with galactose-phenyl-hydrazone on the other. The resultant products of both were identical. It was assumed that their structure was due to the formation of chelates. 1. Finally

MESTER, LASZLO

Chemical Abst.
Vol. 48 No. 4
Feb. 25, 1954
Organic Chemistry

Preparation of formazans in the sugar group. Géza Zemplén and László Mester (Tech. Univ., Budapest). *Acta Chim. Acad. Sci. Hung.* 2, 9-14 (1953) (in German). — The increasing importance of formazans as biol. indicators and analytical reagents induced studies to det. whether sugar formazans can be prepd. by treating the aldehydic forms of sugar phenylhydrazones with alk. diazo solns. The phenylhydrazones of mannose, galactose, and glucose in alc. soln. contg. NaOH, treated with diazotized PhNH₂, gave a phenylformazan (I), m. 158-61°, identical with that prepd. from CH₃CO₂H. Treatment of I (0.8 g.) in CHCl₃ with 0.15 g. Pb(OAc)₂ yielded 0.5 g. phenyl azo-diphenyltetrazolium chloride, m. 250°. When the phenylhydrazones of sugars were treated with diazo solns. in a pyridine soln. (instead of alkali hydronide), sugar formazans, as new N-contg. derivs. of sugars, were obtained: HOCH₂[CH(OH)]₂CH:NNHPh + PhN:NOH → HOCH₂[CH(OH)]₂C(:NNHPh)N:NPh. Treating 3.35 g. galactose phenylhydrazone in 30 ml. EtOAc and 30 ml. pyridine with 3.5 g. crystd. NaOAc, adding a soln. of 1.3 g. diazotized aniline at -5° with vigorous stirring, dilg. with 300 ml. ice H₂O, filtering, and recrystg. the product from hot BuOH gave 2.84 g. brass-colored galactose formazan, m. 167-8°. Similarly mannose phenylhydrazone in enough pyridine for soln. yielded mannose formazan, m. 174-5°. Glucose phenylhydrazone "a" (cf. Stempel, C.A. 28, 4387) gave no formazan under identical conditions whereas glucose phenylhydrazone "b" (cf. Behrend and Lohr, C.A. 2, 3069) gave glucose formazan, m. 177-8°, in a good yield. The quant. data obtained in these reactions proved that only the aldehydic forms of sugar phenylhydrazones participate in the formation of formazans. István Fially

chem
③

MESTER, LASZLO

Chemical Abst.
Vol. 48 No. 4
Feb. 25, 1954
Organic Chemistry

Structure of formazans of the sugar group. Géza Zemplén, László Mester, Andris Messner, and Ede Eckhart (Tech. Univ. Budapest). *Acta Chim. Acad. Sci. Hung.* 2, 25-32(1952)(in German).--The reaction of sugar phenylhydrazones with a neutralized soln. of diazotized PhNH_2 (I) was investigated to det. the actual mode of formation of sugar formazans. The linkage of I can not take place at the HO group of the sugar mol., nor at the imide group of the phenylhydrazone. The latter possibility exists theoretically but the intermediate product rearranges to formazan. The β -position of the phenylhydrazone offers no chances for the linkage under these conditions, thus only the azomethine C atom of the sugar phenylhydrazone remains as a possible location for the linkage. Galactose in 90% EtOH and pyridine, with crystd. NaOAc and I gave no ppt. when dild. with water. Similar treatment of galactose methylphenylhydrazone and arabinose diphenylhydrazone yielded the unchanged initial compd., since there is a substituted imino H and according to the Busch theory (B. and Pfeiffer, C.A. 20, 2992; B. and Schmidt, C.A. 25, 5152) phenylhydrazones contg. substituted NH groups give no formazans. Conversely, the treatment of galactose β -bromophenylhydrazone with I yielded the corresponding galactose formazan, corroborating that β -substitution does not inhibit this reaction: the brownish red galactose β -bromoformazan, m. $101-2^\circ$, was obtained in 2.8 g. yield by treating 2.3 g. galactose β -bromophenylhydrazone and 2.3 g. crystd. NaOAc in 8 ml. EtOH and 13 ml. pyridine at -5° with a soln. of 0.7 I at -5° , allowing to stand 24 hrs., filtering, drying in a vacuum desiccator, and recrystg. from hot BuOH. As a decisive confirmation of the formazan structure, the same compd., m. $101.5-2.0^\circ$, was prepd. also by adding 5.85 g. isopentyl nitrite drop by drop to 3.4 g. $\text{BrC}_6\text{H}_4\text{NH}_2$ in a 14 ml. abs.

MESTER, LASZLO

HUNG.

Oxidation and reduction of sugar formazans. Géza Zemplén and László Mester (Univ. Eng. Inst. Org. Chem., Budapest). Magyar Tudományos Akad. Kém. Tudományok Közleményei 3, 7-14 (1953).—Sugar formazans were successfully oxidized to the corresponding tetrazolium compts. Thus d-galactodiphenylformazan (I) after its acetylation was oxidized by Pb(OAc)₂ to penta-acetyl-d-galactodiphenyltetrazolium chloride (II). The free d-galactodiphenyltetrazolium chloride (III) was then obtained from II by sapon. with MeONa. The reduction of III with vitamin C and MeONa gave I. Reduction of I with H₂S gave HOCH₂(CHOH)₄C(NHNHPh)₂S having antitubercular effect.

Nicholas Feldman

MESTER, JASZLO

GERU

Preparation of *o*-phenyltetrazolium compounds. *Chem. Zvesti.* 1946; Meier, and Ede Eckhart (Tech. Univ., Budapest), *Chem. Zvesti.* 86, 473-8 (1954). *o*-Galactosylphenyltetrazolium chloride pentaacetate (I) was formed by the oxidation of *o*-galactodiphenylformazan pentaacetate (II) with Pb(OAc)₂ (III), and was deacetylated to the pentahydroxy compd. (IV). II (10.4 g.) in 130 cc. CHCl₃ was treated with 8 g. III for 30 min. After reprecip. of Pb with HCl-satd. aq. alc., the addn. of Et₂O to the filtrate gave 7.8 g. crystals, m. 102-3°, which were dissolved in H₂O and treated with a few drops 10% HCl to induce crystn. Recrystn. gave I, m. 246°, [α]_D²⁰ 30.3° (alc.). I (2.5 g.) in MeOH was boiled 4 min. with 2-3 cc. 0.5N MeONa and treated with HCl-satd. MeOH. The addn. of Et₂O pptd. 1.1 g. IV, which was redissolved in aq. alc. and reprecip. with Et₂O several times. IV (0.73 g.) was obtained, [α]_D²⁰ 21.7° (H₂O). When 0.5 g. I was suspended and treated with 0.3 g. vitamin C, the addn. of Et₂O pptd. 0.17 g. *o*-galactodiphenylformazan (V), which, recrystd. from BuOH, m. 107°. I in 2% NaOH treated with vitamin C formed II, m. 142°. The oxidation of 1 g. *o*-mannodiphenylformazan in HCl-satd. aq. alc. with AmNO₂ yielded 3 g. *o*-mannonic acid-γ-lactone, m. 151-3°, [α]_D²⁰ 47.5° (H₂O); pentaacetate, m. 121°. The same treatment of V gave unidentifiable products. The toxicity of I and IV to mice is given. Erica Stouffer

MA. JEW

MESTER, LASZLO

Preparation of thio-aldonic acid phenylhydrazide by the action of hydrogen sulfide upon sugar-azimazyle. *Chem. Zentrbl.*, 1936, 60, 806 (German). (Throughout this abstr. R = *D-glucose-pentahydroxypentyl*.) The reduction of sugar-azimazyle with H_2S yields the phenylhydrazide of thio-aldonic acids. The constitution of these deriva. is proved by the prepn. of new thiazoline derivs. of the sugar series. Thus a soln. of 1 g. $RC(:NHNHPh)N:NPh$ in 100 ml. 90% EtOH satd. with H_2S , kept 48 hrs. at room temp., filtered from the S and concd. *in vacuo* gave 0.57 g. $RC(:S)NHNHPh$ (I), m. 174°, $[\alpha]_D^{25}$ 31.6° (C₁₀H₁₇N). I (1 g.) in 50 ml. H₂O and heated 1 hr. until no more H₂S was evolved, and the hot soln. decolorized with C and concd. *in vacuo* gave 0.3 g. $RCONHNHPh$, m. 202°, $[\alpha]_D^{25}$ 9.68° (H₂O). I (0.5 g.) and 0.25 g. BzH in 0.6 ml. abs. EtOH treated with 0.25% HCl and the mixt. warmed on a H₂O bath 1 min. yielded 0.5 g. $RC:N:NPh.CHPh.S$ m. 163-4°, $[\alpha]_D^{25}$ 226.1° (96% EtOH). $R'C(:NHNHPh)N:NPh$ (R' = *D-glucose-pentahydroxypentyl*) (1.5 g.) gave 1.1 g. $R'C(:S)NHNHPh$, m. 178-9°, $[\alpha]_D^{25}$ 69.4° (C₁₀H₁₇N). J. S. Martio, Jr.

HUNG.

Direct preparation of the so-called β -acetoxyglucose.
 G. Zemplén, L. Mester, and E. Eckhart (Tech. Univ.
 Budapest). *Acta Chim. Acad. Sci. Hung.* 4, 13-7 (1954) (in
 German).—A simpler and less ambiguous method for the
 prepn. of Schünbach's so-called β -acetoxyglucose (I)
 (C.A. 22, 1760; 23, 4352; 25, 920) is reported, together with
 a probable explanation for its abnormal properties. β -
 Pentaacetylglucose (II) (20 g.) in 40 ml. abs. CHCl_3 stirred
 12 hrs. with 7 g. sublimed AlCl_3 , the mixt. poured onto
 ice, the CHCl_3 layer washed acid-free, dried, distd. *in*
vacuo, and abs. Et_2O added to the residue yielded 14.3
 g. (76%) so-called I, m. 100-1°, $[\alpha]_D^{25}$ -17.8° (CHCl_3),
 in agreement with S.'s compd. Also in agreement with
 S., 3 g. I in 7.5 ml. Me_2CO stirred 5 min. with 1.2 g. dry
 Ag_2CO_3 and 1.4 g. powd. AgNO_3 in 50 ml. Me_2CO and 0.18
 ml. H_2O , filtered, the filtrate distd. *in vacuo*, and the residue
 dissolved in 100 ml. abs. Et_2O and allowed to stand 12 hrs.
 yielded 1.2 g. cryst. α -tetraacetyl-D-glucose, m. 100-7°
 (from Et_2O), $[\alpha]_D^{25}$ 129.5° (CHCl_3). Warming 2 g. I 1 hr.
 with 1.8 g. AgOAc and 10 ml. Ac_2O gave back 0.7 g.
 II, m. and mixed m.p. 130-1°. II (5 g.) in 30 g. Et_2O

(CHCl₃)

MA

G. ZEMPLER

treated with 3.5 g. dry AlBr₃ in 15 g. EtBr in a procedure similar to the above prepn. of I gave 1 g. α-acetobromoglucose (II), m. 85-9°, [α]_D²⁰ 182.4° (CHCl₃), probably produced by formation of the easily isomerized and not yet isolated β-acetobromoglucose. Alik. hydrolysis of I and II at room temp. required 4.13 and 4.82 equivs. alc. KOH, resp., and after 0.5 min. refluxing the corresponding equivs. used were 3.86 and 4.71. This abnormal behavior of I, supplementing its abnormal properties found by S. (*loc. cit.*), leads to the conclusion that I has an orthoester structure (cf. Facsu and Rich, *C.A.* 29, 2924). H. S. F.

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Mester, L.

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The preparation of 4,6-diaminotetrahydrophenone and its derivatives. (Z. Zimnik, L. Mester, and Cs. Szántay (Tech. Univ., Budapest). *Acta Chim. Acad. Sci. Hung.* 4, 85-8 (1954) [in German]).—4,6-Diaminotetrahydrophenone (I), thus far unreported, owes its increased importance to its structural relationship with streptodine: 2,5,1,3-(AcO)-C₆H₃(OMe)₂ (II) (3 g.), prepd. from 1,2,3-C₆H₃(OH)₃ (cf. Baker, C.A. 36, 478), added to 120 ml. cold fuming HNO₃ at such a rate as to keep the temp. below 10° (about 20 min.), and the mixt. stirred 1 hr. below 10° and poured onto 500 g. ice yielded 25 g. of a mixt. (III) of mono- and dinitro derivs. of dimethoxyquinone and acetylated dimethoxyhydroquinone. III (20 g.) warmed 1.5 hrs. on a H₂O bath with 100 ml. Ac₂O and 10 g. NaOAc gave, after fractional crystn. from EtOH, 10 g. 2,5,1,3,4,6-(AcO)₂C₆H₂(NO)₂ (IV), m. 102°, and 3 g. 2,5,1,3,4,6-(AcO)₂(MeO)₂C₆H₂(NO)₂ (V), m. 105°. Attempts to demethylate IV and V led to the discovery that 1 hr. heating with C₆H₅N decompd. IV completely and left V unchanged, and that a 2nd method for isolating V was thus provided. Heating 0.5 g. IV only 1.5 min., however, with C₆H₅N on a H₂O bath yielded 0.2 g. monoacetate of 2,5,1,3,4,6-(HO)(MeO)₂C₆H₂(NO)₂, m. 166.5°. IV (0.1 g.) reduced in 2 ml. EtOH at 60° with 0.5 g. Na-S-O₂ in 8 ml. H₂O, the mixt. cooled after 3 min., extrd. twice with 8 ml. Et₂O, dried in a stream of H₂, the resid. heated 10 min. on a H₂O bath with 0.5 ml. Ac₂O, and the mixt. treated with 3 ml. H₂O yielded 0.04 g. 2,5,1,3,4,6-(AcO)₂(MeO)₂C₆H₂(NHAc)₂ (VI), m. 244° (from 1 ml. EtOH). When NaOAc was used with the Ac₂O a compd. with lower N content and m. 155° was formed but not further investigated. IV was also reduced by hydrogenation over Pd-C, whereby the required quantity of H₂ was absorbed within 10 min. Similar reductions of 0.1 g. V yielded 0.06 g. 2,5,1,3,4,6-(AcO)(MeO)₂C₆H₂(NHAc)₂, m. 155.5°. VI is the first actually prepd. deriv. of I, and it is unusually stable.

H. S. French

MESTER, LASZLO

The structure of trihydroxycyclohexanone synthesized from quinic acid. *Cz. Zemmich, Laszlo Mester, and István Dory* (Műszaki Egyetem, Budapest). *Magyar Tudományos Akad. Kém. Tudományok Osztályának Közleményei* 4, 181-8; *Acta Chim. Acad. Sci. Hung.* 4, 181-80(1954) (in German)(English summary).—3,4,5-Trihydroxycyclohexanone prepd. by the method of Fischer (*C.A.* 26, 4805) gave 2 isomers, m. 72° (I) and 79° (II). II was also prepd. by treating quinic acid (III) with acetone and concd. H_2SO_4 to give the O^4, O^5 -isopropylidene deriv. of III lactone, reducing with $LiAlH_4$ to the carbinol, and oxidizing with $Pb(AcO)_2$ in aq. soln. with a trace of $AcOH$. I, $[\alpha]_D^{25}$ 118.1° and II, $[\alpha]_D^{25}$ 118.0°, mutarotated at 1100 hrs. to $[\alpha]_D^{25}$ -46° and $[\alpha]_D^{25}$ -42°, resp., with II showing the greater initial rate of conversion. I and II are probably the bed and chair forms of the intramol. hemiacetal formed by reaction of the carbonyl group with the C-4-hydroxyl. I thiosemicarbazone m. 165°, $[\alpha]_D^{25}$ 83.4 (EtOH), was identical with the corresponding deriv. of II. Acetylation of this deriv. gave a compd., m. 172-4°, $[\alpha]_D^{25}$ 88.1°. On partial acid hydrolysis, all these thiosemicarbazones gave the same compd., $C_{12}H_{19}ON_2S$, m. 217.3-221°, corresponding to quinal thiosemicarbazone. C. S. Prickett

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MESTER, L.

The reducing power of derivatives of pentahydroxypimelic acid. G. Zemlén, L. Mester, and E. Mészár (Tech. Univ., Budapest). *Acta Chim. Acad. Sci. Hung.* 4, 101-8 (1954) (in German) (English summary).—To test previously reported theories for the reducing power of deriva. of dicarboxylic acids from hexoses (Haworth, *et al.*, *C.A.* 38, 4910; 39, 1138, 1827), derivs. are prepd. of pentahydroxypimelic acid (I). The Ca salt of I (25 g.) was warmed 1 hr. on a H₂O bath with 11.9 g. (CO₂H)₂ and 200 ml. H₂O, the mixt. filtered, evapd. *in vacuo*, the residue dehydrated by repeated evapn. from a 1:1 mixt. of abs. EtOH and C₆H₆, to give 12 g. EtO₂C-

(CHOH)₄CH₂(CHOH)₄CO₂O (II), m. 101°. Acetylation of 5 g. II by Ac₂O either in C₆H₆N at room temp. or with ZnCl₂ on a H₂O bath yielded 6 g. tetra-Ac deriv. (III) of II, m. 145-6°, b. 230-40°. Refluxing 3 g. III 3 hrs. with 40 ml. abs. EtOH contg. 10% HCl and evapg. *in vacuo* gave 1.6 g. II, and similar treatment with PrOH in place of EtOH gave from 0.5 g. III 0.1 g. Pr ester (IV) of II, m. 131-2° (from EtOH and Et₂O), formed also by the similar hydrolysis of II. Acetylation of 0.5 g. IV (like II) yielded 0.35 g. tetra-Ac deriv. (V) of IV, m. 102°, whose hydrolysis as above yielded II. The Ca salt of I (4 g.) suspended in 20 ml. Ac₂O was treated during 1.5 hrs. on a H₂O bath dropwise with 1.3 ml. concd. H₂SO₄, 20 ml. Ac₂O, and 2 g. dry ZnCl₂ (the latter added after 0.5 hr.), the mixt. heated an

addnl. 2 hrs., filtered, evapd. *in vacuo*, and the residue dissolved in 30 ml. CHCl₃, to yield, after purification and 1 day standing, 1.3 g. penta-Ac deriv. (VI) of I, m. 118° (from AcOEt and petr. ether), raised to 166° after drying *in vacuo*. The Ca salt of I (9 g.), suspended in 70 ml. abs. EtOH, was satd. with dry HCl, and 7 g. of the resulting hygroscopic solid allowed to stand 24 hrs. with 25 ml. AcCl, warmed 30 min. on a H₂O bath and kept several days to give 3 g. EtO₂C(CHOAc)₄CO₂Et (VII), m. 97-8°, b. 245-55°. III and V, after treatment with alkali, reduced Bertrand's soln. 26 and 27.9%, resp., (calcd. for glucose), whereas II, IV, VI, and VII failed to reduce. The reducing power of III and V is explained, as with the sugars (*loc. cit.*), by the enolisation caused by the inductive effect of the CO group, but this effect is lessened by the longer chain sufficiently to prevent reduction by the other derivs. of I. The ultraviolet absorption spectra of III and V in alk. soln. differ from those of ascorbic acid and the lactones of the sugar acids contg. the enol-forming OH within the lactone ring, but are similar to that of di-Et saccharate with no lactone ring, and it is suggested that the enol-forming OH responsible for the reducing power of III and V lies outside the lactone ring.

H. S. French

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MESTER, I.

HUNG.

75. Fundamental causes of the fibrous structure of metals — I. Meester, (Gép — Vol. 8, 1954, No. 8, pp. 278-279, 3 figs.)

Fibrous structure of metals is caused by smaller or larger inhomogeneities developed in the molten state or in the course of congealing due to non-metallic inclusions such as oxides, sulphides, silicates. Inclusions are formed from the layer of slag, the products of the additions (deoxidizers), particles of the refractory lining and undissolved alloying constituents. Another source of inhomogeneities is the build-up of crystals the causes and consequences of which are described. Since they play an important role in the fibrousness of metals, the crystal structure of the castings is given. The formation of the outer, thin, globular, the inner trans and the innermost dendritic crystals is dealt with as well as their effect on the fibrous structure. The part played by greater build-up in castings and the possibilities of reducing inhomogeneities are described.

MESTER, L.: MAJOR A.

Determination of the constitution of sugar phenylhydrazones. p. 188. Vol 4, no. 1/2, 1955. KŐZLEMÉNYEI. Budapest, Hungary.

So: Eastern European Accession. Vol 5, no. 4, April 1956

MESTER, L.

Determination of the constitution of glucosazone. p. 201. Vol 6, no. 1/2, 1955.
KOZLETSKY. Budapest, Hungary.

So: Eastern European Accession. Vol 5, no., 4, April 1956

MENTER, L.: MAJOR, A.

Constitution of so-called mixed A and mixed B osazones. p. 213. Vol 6, no. 1/2, 1955. KOZLEMETENYEI. Budapest, Hungary.

So: Eastern European Accession. Vol 5, no. 4, April 1956

MESTER, L.: MAJOR, A.

Constitution of Diels' anhydroglucosazone. p. 217. Vol 6, no. 1/2, 1955.
KOZLEMENYEI. Budapest, Hungary.

So: Eastern European Accession. Vol 5, no. 4, April 1956

MEISTER, L.

✓ 11. Polarographic analysis of tetrazolium and formazan derivatives of sugar. (In English) B. Jambor, L. Mešter, *Acta Chimica Academiae Scientiarum Hungaricae*, Vol. 6, 1955, No. 3-4, pp. 263-273, 11 figs.

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Chem The mechanism of the reduction of galactodiphenyl tetrazolium chloride, its acetate and the corresponding formazan derivative may be established by polarography. It was found that in acid media primarily the nitrogen atoms at the 1 and 2 positions of galactodiphenyl tetrazolium chloride are reduced whereas in alkaline media the nitrogen atoms at the 3 and 4 positions of the molecule are reduced in the first place. Based on empirical data and theoretical considerations it seems feasible to assume that the E vs. pH curves of the first and second reduction waves intersect as was found formerly in the case of triphenyl tetrazolium chloride although the polarographic data obtained failed to furnish any evidence concerning this phenomenon. The oxido-reduction potentials of all three substances examined were found to be very close to each other and to the potential of triphenyl tetrazolium chloride. In alkaline media however the E vs. pH value of the first reduction step differs substantially from the corresponding value of the triphenyl tetrazolium chloride compound. The oxido-reduction potential of the triphenyl tetrazolium chloride compound proved to be independent of the pH in the alkaline range whereas that of galactodiphenyl tetrazolium chloride was highly pH-dependent. The practical usefulness of galactodiphenyl tetrazolium chloride and its acetate as indicators for oxido-reduction processes is discussed.

MESTER, L.

Identification of aldoses in the form of formazans. p. 345
MAGYAR TUDOMANYOS AKADEMIA vol. 7, no. 3/4, 1955
Budapest, Hungary

SOURCE: SEAL, Vol 5, no. 7, July 1950

MESTER, L.

PROBLEM of the ~~d~~iazotization of wool. p. 351
MAGYAR TUDOMANYOS AKADEMIA Vol. 7, no. 3/4 1955
Budapest, Hungary

SOURCE: EAST EUROPEAN ACCESSIONS LIST Vol. 5, no. 7, July 1956

MESTER, L.

Synthesis of glucogenkwanin. p. 363.

MAGYAR TUDOMANYOS AKADEMIA Vol. 7, no. 3/4, 1955
Budapest, Hungary

SOURCE: EAST EUROPEAN ACCESSIONS LIST Vol. 5, no. 7, July 1956

... of formazone in pyridine solution. The reaction of benzaldehyde, a nitrophenylhydrazine, also proceeds smoothly if the conditions are adjusted. The reaction is slow in the case of a nitro solution in the case of *ortho*-nitro isomers since chelation is imposed. The *meta* and *para* substituted triphenylamines are readily oxidized to yield the corresponding tetrazolium derivatives. In contrast to this the reaction is extremely slow in the case of the *ortho* isomers which may be explained by the chelation of the *ortho*-nitro group.